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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/733,336	12/12/2003	Abhay Sathe	10030721-1	7472

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EXAMINER	
ROMANO, JOHN J	

ART UNIT	PAPER NUMBER
2192	

MAIL DATE	DELIVERY MODE
06/06/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/733,336	SATHE, ABHAY	
	Examiner	Art Unit	
	John J. Romano	2192	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12 December 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *12 December 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *12/12/2003*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. Claims **1-20** are pending in this action.

Information Disclosure Statement

2. The Information Disclosure Statements filed on December 12th, 2003 has been considered.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

3. Claims **1-20** are rejected, the claimed invention is directed to non-statutory subject matter. In regard to independent claims **1, 3, 17, 18** and **19**, are directed to software per se, which is not a product of manufacture. Therefore, the claims fail to fall into a statutory category.

Additionally, independent claims **1, 3, 17, 18** and **19** do not recite functional descriptive material comprising a physical or logical relationship between the elements recited. Instead the limitations appear directed toward intended use. Appropriate correction is required.

In regard to dependent claims **2** and **4-16**, they are rejected for at least depending on rejected base claims.

Similarly, independent claim **20** is directed to software per se. The claim limitations do not embody a tangible, physical structure in such a manner as to enable

the software to act as a computer component and realize any functionality. As such, they are interpreted as being directed toward software per se, and not a product of manufacture or apparatus. Therefore, the claims fail to fall into a statutory category

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims **1-5** and **18** are rejected under 35 U.S.C. 103(a) as being unpatentable over Hare, US 6,292,909 (art made of record & hereinafter **Hare**) in view of Binder et al., US 2003/0156549 (art made of record & hereinafter **Binder**).

In regard to claim **1**, **Hare** discloses:

- "*An apparatus comprising: a plurality ...of software modules ...respectively, of a network...*" (E.g., see Figure 2 (50)), wherein the MIB's are software routines (modules) of a network.
- "*...including flows respectively corresponding to test locations, a respective flow for a corresponding test location being a flow of software modules from the library...*" (E.g., see Figure 2 & Column 4,

lines 27-55), wherein the MIB routines execute a single test set, comprising a sequential list of test cases associated with a particular location.

But **Hare** does not expressly disclose "*...including flows respectively corresponding to test locations, a respective flow for a corresponding test location being a flow of software modules from the library...*". However, **Binder** discloses:

- "*...and a graphical end user interface (GUI) via which an end user constructs a graphical model for a test of the network...*" (E.g., see Figure 1 (8) & paragraph [0021]), wherein the Application Model Builder 8 models a test of a network via a GUI.

Hare and **Binder** are analogous art because they are both concerned with the same field of endeavor, namely, testing a distributed network. Therefore, at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to combine **Binder's** graphical modeling of network tests with **Hare's** test editor. The suggestion to combine was evident by **Binder's** disclosure of (E.g., see Figure 1 (8) + (9) & paragraph [0021]), wherein the Test Repository Manager 9 manages a large collection of test models and test runs to provide the modeling capabilities of the various disclosed network tests.

But the combination of **Binder** and **Hare** do not expressly disclose "*...a plurality of libraries*" or *maintained at a plurality of test locations...*". However, it would have been obvious to one of ordinary skill in the art, at the time the invention was made to maintain a library of software modules at a plurality of test locations. The motivation to

do so would have been to distribute information, as is old and well known in the art of network management. Therefore, one of ordinary skill in the art, would have been able to determine to provide multiple copies of the software libraries to the respective locations where they are used.

In regard to claim **2**, the rejections of base claim **1** are incorporated. Furthermore, **Hare** discloses:

- "*...wherein the GUI is run at a location remote from at least one test location, so that the end user constructs the graphical model and runs the test from the remote location.*" (E.g., see Figure 1 & Column 2, line 40 – Column 3, line 28), wherein remote testing is disclosed in conjunction with HP openview equipment, identified by reference 42, to provide SNMP control for carrying out tests.

In regard to claim **3**, see claim **1**.

In regard to claim **4**, see claim **2**.

In regard to claim **5**, the rejections of base claim **3** are incorporated. Furthermore, **Hare** discloses:

- "*...each flow sequentially runs the software modules contained therein.*" (E.g., see Figure 2 (58)), MIBs, wherein each test case set is a sequential list of test cases.

In regard to claim **18**, see claim **1**. Furthermore, **Hare** discloses:

- "*...in which a subtest of at least one software module is constructed for each test location.*" (E.g., see Figure 8 & Column 14, lines 13-63),

wherein different test cases are built depending on the system components used.

5. Claims **6-10** and **19** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Hare** in view of **Binder** and further in view of Schwaller et al., US 6,625,648 (art made of record & hereinafter **Schwaller**).

In regard to claim **6**, the rejections of base claim **3** are incorporated. Furthermore, **Hare** discloses:

- "*...test modules that perform predefined test operations....*" (E.g., see Figure 4 & Column 7, lines 19-41), wherein.

But **Hare** and **Binder** do not expressly disclose "*...and coordination modules to coordinate inter-operation of test modules in different flows.*". However, **Schwaller** discloses:

- "*...and coordination modules to coordinate inter-operation of test modules in different flows.*" (E.g., see Figure 4A & Column 15, lines 15-32), wherein a transaction module to coordinate inter-operation of test modules is taught.

Hare, Binder and **Schwaller** are analogous art because they are both concerned with the same field of endeavor, namely, testing a distributed network. Therefore, at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to combine **Schwaller's** coordination modules with **Hare and Binder's** test editor. The suggestion to combine was evident by **Schwaller's** disclosure

of endpoint nodes testing (E.g., see Column 3, lines 33-58), to achieve network performance test results from a pair of endpoint nodes.

In regard to claim **7**, the rejections of base claim **6** are incorporated. Furthermore, **Schwaller** discloses:

- "*...coordination modules are employed in a pair, comprising: a first member of the pair employed in a first flow to send a coordination message to a second flow; and a second member of the pair employed in the second flow to receive the coordination message from the first member.*" (E.g., see Figure 4A & Column 4, lines 18-26), wherein a send-receive transaction model are tested. The transaction model is interpreted as the coordination module.

In regard to claim **8**, the rejections of base claim **7** are incorporated. Furthermore, **Schwaller** discloses:

- "*...the coordination message also contains test generated data.*" (E.g., see Figures 4A-4C), wherein test generated data (send and receive data generated from the test model) is comprised in the coordination message.

In regard to claim **9**, the rejections of base claim **8** are incorporated. Furthermore, **Schwaller** discloses:

- "*...the test generated data is formatted in a predefined format.*" (E.g., see Figure 9 & Column 19, lines 29-51).

In regard to claim **10**, the rejections of base claim **8** are incorporated. Furthermore, **Schwaller** discloses:

- "*...each test location has an associated information holding environment, in which the test generated data is stored.*" (E.g., see Figure 6), wherein test results are reported and thus stored in order to be effective.

6. Claims **11-17** and **19** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Hare** in view of **Binder** and further in view of Hartman et al., "UML-Based Integration Testing" (art made of record & hereinafter **Hartman**).

In regard to claim **11**, the rejections of base claim **3** are incorporated. Furthermore, **Hartman** discloses:

- "*...a conversion unit to generate the flows from the graphical model.*" (E.g., see Figure 6 & Section "4.2 Test Generation"), wherein the Figure 6 presents the test case that is derived from the global behavioral model.

Hare, Binder and **Hartman** are analogous art because they are both concerned with the same field of endeavor, namely, testing a network. Therefore, at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to combine **Hartman's** test generation methods with **Hare and Binder's** test editor. The suggestion to combine was evident by **Harman's** disclosure of automating the

execution step to automatically generate their tests (See Hartman, Section "7. Related Work").

In regard to claim **12**, the rejections of base claim **11** are incorporated. Furthermore, **Hartman** discloses:

- "*...a converter to convert the graphical model into text; and a parser to generate the flows from the text.*" (E.g., see Figure 6 & Section "5.2 TECS", "Test Case Compiler"), wherein the compiler parses and converts the test case definition into C++.

In regard to claim **13**, the rejections of base claim **12** are incorporated. Furthermore, **Hartman** discloses:

- "*...the parser interacts with the library to generate the flows.*" (E.g., see Figure 6 & Section "5.2 TECS", "Test Harness Library"), wherein the C++ framework that provides the basic infrastructure for creating the executable test drivers is stored.

In regard to claim **14**, the rejections of base claim **12** are incorporated. But the combined art of **Hare, Binder** and **Hartman** do not expressly discloses "*...a language used by the converter to convert the graphical model into text is XML.*" (E.g., see Figure 6 & Column 12, lines 16-29). However, it would have been obvious to one of ordinary skill in the art, at the time the invention was made to use XML to convert a rational rose model to text as XML is old and well known in the art of programming to provide custom data communication services.

In regard to claim **15**, the rejections of base claim **3** are incorporated. Furthermore, **Hare** discloses:

- "*...the library is centrally located.*" (E.g., see Figure 1), wherein a centrally located HP Operations Center 40 and storage Mainframe 32 is disclosed.

In regard to claim **16**, see claim **1**.

In regard to claim **17**, see claims **1** and **6**.

In regard to claim **19**, see claims **1, 6, 11** and **12**. Furthermore, **Smaalders** discloses:

- "*...at least one agent to run the flows; at least one probe deployed at each test location to collect data from at least one attribute of the network and communicate the data with the at least one agent; and a central controller to control running of the flows and collect the data from the at least one agent.*" (E.g., see Figure 5 & Column 8, lines 17-19), wherein

In regard to claim **20**, this is a computer readable medium version of the claimed apparatus discussed above, in claim **19**, wherein all claimed limitations have also been addressed and/or cited as set forth above. For example, see **Hare**, computer readable medium (Figure 1), wherein instructions to implement the process may be stored.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John J. Romano whose telephone number is (571) 272-3872. The examiner can normally be reached on 8-5:30, M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tuan Q. Dam can be reached on (571) 272-3695. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JJR

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SUPERVISORY PATENT EXAMINER